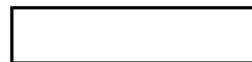


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MARCH 1968

**EVALUATIONS OF SOVIET
SURFACE-TO-SURFACE
MISSILE DEPLOYMENT
28TH REVISION**

**A Report of the Deployment Working Group
of the
Guided Missile and Astronautics Intelligence Committee**



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The necessity of continued, periodic publication of Evaluations of Soviet Surface-to-Surface Missile Deployment, a report of the Deployment Working Group of the Guided Missile and Astronautics Intelligence Committee (GMAIC), is currently under review. This report, originally a bi-monthly report, is now scheduled as a quarterly review. However, the very considerable expenditure of effort, the apparent declining need, and the number of other publications within the intelligence community dealing with the same material, would appear to make continued publication of this report unnecessary.

To assist in this reevaluation all recipients are requested to fill out the attached questionnaire and return it to the Chairman, GMAIC, as soon as possible. Recipients not replying to the questionnaire will be removed from the distribution list in any event.

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The Guided Missile and Astronautics Intelligence Committee (GMAIC) wishes to express its appreciation to the National Photographic Interpretation Center for its assistance in the editing, illustration, and publication of this report.

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DEPLOYMENT WORKING GROUP

MEMBERSHIP

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NOTE: Attention is invited to the questionnaire at the end of this report. All relative correspondence should be directed to the Chairman, Guided Missile and Astronautics Intelligence Committee (GMAIC).

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PREFACE

This report is published by the GMAIC Deployment Working Group (DWG) to provide a current evaluation of all ICBM, IRBM, and MRBM deployment, including numbers, types of site configurations, estimated construction and operational status, and other evaluations of the DWG. These data constitute the majority view of the DWG membership, and may not correspond precisely to individual assessments by each member.

Dissemination of the report was previously limited to holders of the DWG report, Soviet Surface-to-Surface Missile Deployment. Because the information contained herein is both supplemental and self sustaining, distribution will no longer be limited to holders of the above report.

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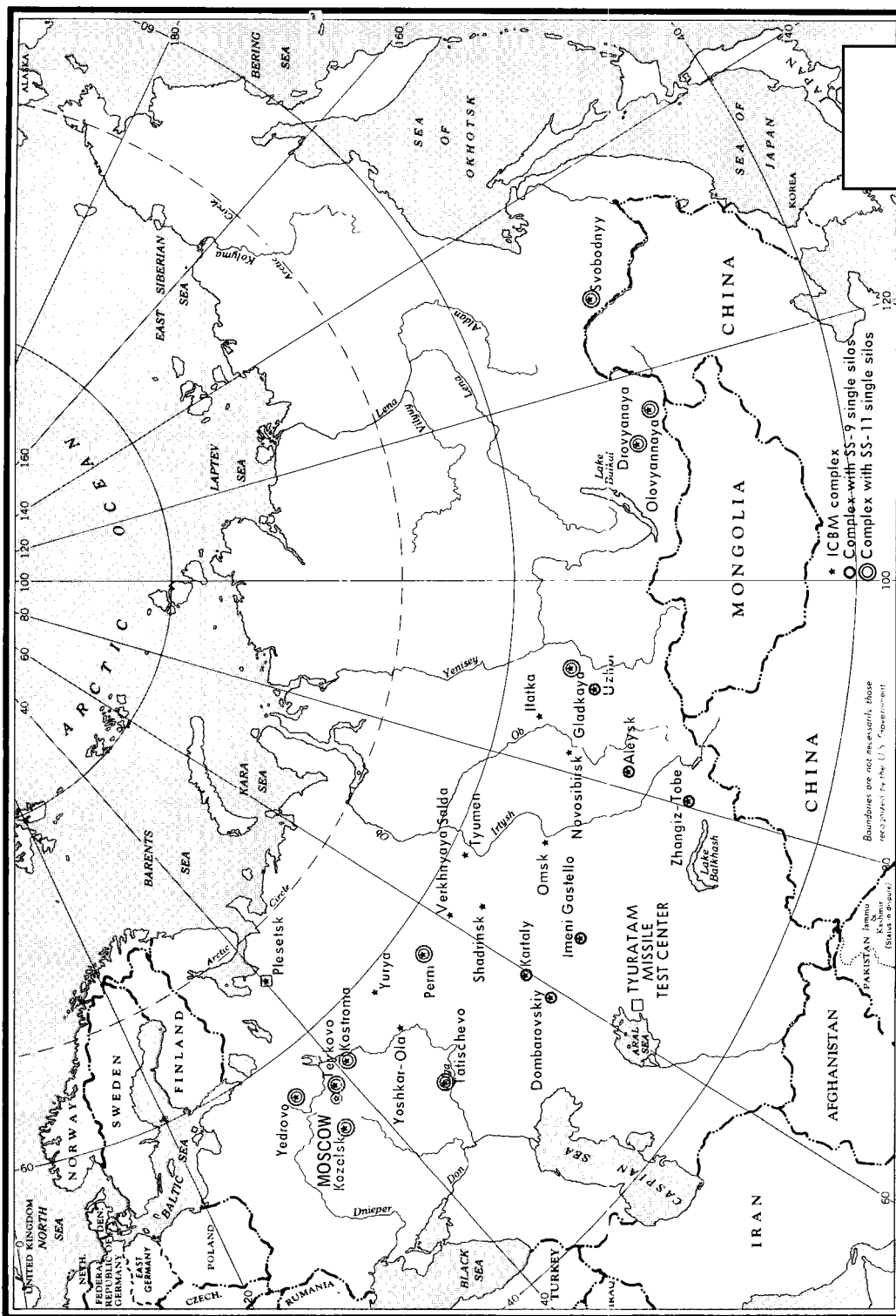


FIGURE 1. DEPLOYMENT OF SOVIET ICBM COMPLEXES.

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INTRODUCTION

This report is the 28th Revision of Evaluations of Soviet Surface-to-Surface Missile Deployment, prepared by the Deployment Working Group (DWG) of the Guided Missile and Astronautics Intelligence Committee (GMAIC). The information contained in this and previous revisions is self-sustaining and supplements the basic DWG report Soviet Surface-to-Surface Missile Deployment which provides detailed information on launch facilities of the Soviet Strategic Rocket Forces. The basic report, dated 1 January 1962 (Control Number [REDACTED]) has been revised and updated on a periodic basis. Further updating is accomplished in reports prepared and published for GMAIC by the National Photographic Interpretation Center (NPIC).

This 28th Revision summarizes and updates all the data received since [REDACTED] missions during this period, and continuing analysis of previous missions and other sources have provided additional information on the Soviet strategic missile deployment program. A summary of estimated status of identified ICBM, IRBM, and MRBM launchers at deployed complexes is given in Table 1. Cut-off date for information in this report is [REDACTED]

SOVIET ICBM DEPLOYMENT

Significant developments in the Soviet ICBM deployment program since publication of the 27th Revision include the identification of a number of additional single silos under construction at deployed complexes, a continued shortening of construction time at some groups of silos, and the appearance of new silos of an unidentified type at the Yoshkar-Ola Complex. The overall rate of new silo starts during this period has been slow, but photographic interpretation problems attributable to climatic

conditions in the USSR prevent us from ascertaining, with certainty, the current pace of these programs.

CURRENT DEPLOYMENT

No new ICBM complexes have been discovered since our latest revision; the number remains at 25. See Figure 1 for locations of deployed ICBM complexes. These complexes now contain a total of 1,009 confirmed and probable launchers, of which some 146 are soft and 863 are hard. Included in the hard launcher count are 785 single silos.

Of the 1,009 confirmed and probable launchers 750 to 800 are estimated to be operational, including some 640 in a hard configuration. In addition there are some 64 launchers at the Tyuratam Missile Test Center, at least 45 of which are considered to be complete. We continue to believe that none of the Tyuratam launchers is maintained in an around-the-clock operational status, but, granted sufficient alert time, a majority could be used in an operational role. The ICBM sites have been designated by type, as shown and explained in Figure 2.

TYPE IIIC DEPLOYMENT

There has been no expansion of the Type IIIC program to complexes other than those originally identified in [REDACTED] Aleysk, Dombarovskiy, Imeni Gastello, Kartaly, Uzhur, and Zhangiz-Tobe. It should be noted that single-silo site construction has recently begun at the Yoshkar-Ola complex and, as yet, these sites are unidentified as to type and weapon system utilized. Although construction has not reached a point where a firm site signature can be identified, the possibility exists that these sites could emerge as a modified Type IIIC, for a variant of the SS-9 system.

Since [REDACTED] new IIIC sites have been detected as follows: Dombarovskiy 6, Kartaly 2, Imeni Gastello 2, and Zhangiz-Tobe

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3. These 13 new sites represent the nucleus for four new groups which were started within the past six months. Thus the detected pace for the last half of 1967, based on new group starts, is consistent with the average pace for the program. However, it is possible that at least one group started in [] has gone undetected.

Currently, we have detected 32 IIIC groups as follows: Dombarovskiy and Uzhur 7 each, Kartaly 5, Imeni Gastello and Zhangiz-Tobe 5 each, while Aleysk has only 3. The extent of the program cannot be determined at this time. However, the fact that new groups have been started in 3 of the 6 complexes and during the last six months indicates the program is still active.

The current inventory of the Type IIIC sites is shown below, followed by a summary of deployment and recent significant findings at each complex since []

<u>Complex</u>	<u>No of Sites</u>	<u>Operational</u>
Aleysk	19	12
Dombarovskiy	43	24
Imeni Gastello	31	18
Kartaly	31	18
Uzhur	43	30
Zhangiz-Tobe	<u>28</u>	<u>18</u>
	195	120

Aleysk

This complex has three groups, and the last detected group started in the third quarter of 1966. []

[] the support area. The time interval between the start of the first group and the second group was about 15 months, and between the second and third groups about 12 months. On this basis a new group start in the fourth quarter of 1967 would be according to schedule.

Dombarovskiy

One new site start was detected on [] and four additional sites were identified on [] These sites represent the seventh group at this complex. One more site was uncovered on [] Only one other complex, Uzhur, has seven groups.

Imeni Gastello

Two new site starts were detected, one on [] They represent the start of the fifth group. Based on the time interval between group starts at this complex, a sixth group would not be due until about mid-1968.

Kartaly

Two new site starts were detected on [] These sites represent the start of the fifth group. We have observed as much as a nine-month interval between group starts at this complex. On this basis, a sixth group, if planned, would not be started until the second quarter of 1968.

Uzhur

No new sites were detected on missions since [] however, good complete coverage has not been available since [] This complex has seven detected groups, with the latest group having been started about [] The longest time interval between group starts at this complex is about six months. Twelve months have elapsed since the last detected group was begun, suggesting that IIIC deployment may have leveled off at this complex. However,

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Zhangiz-Tobe

Two new site starts were detected on [] [] These sites represent the start of the fifth group. An additional site was discovered on [] [] The longest time interval between group starts at this complex is about ten months. On this basis, a sixth group, if planned, would not start until about mid-1968.

The presence of sizable stockpiles of construction materials at several complexes, and the start of at least four new site groups in the latter half of 1967 at four complexes, indicate the IIC deployment program may continue through 1968.

TYPE IIID DEPLOYMENT

We have identified a total of 572 confirmed and probable Type IIID silos deployed at ten complexes across the USSR. We believe that some 410 to 450 of these silos are now operational. Identified Type IIID silos estimated operational and under construction, as of []

[] are tabulated below by complex and construction wave. Significant developments in the deployment program for Type IIID small single silos since publication of our most recent revision include: 1) the discovery of 33 new sites; 2) continuation of the slowdown of the overall rate of construction starts; and 3) an accelerated pace of construction at some complexes, resulting in the completion of some groups about three months earlier than anticipated.

Possible Third-Wave Deployment

The introduction of Type IIID silos at Teykovo in the first half of 1967 has not been matched by IIID construction at other new complexes. While a firm determination of the pace and extent of the possible third wave of complexes will have to await the acquisition of more evidence, it appears at present that Teykovo was not a forerunner of a new third wave. Indeed, it may represent a last-minute Soviet decision to fill some gap in target coverage.

	Groups Identified	Sites Identified	Sites Estimated Operational	Sites Identified Under Construction	Implied Additional Sites
<u>1st Wave</u>					
Drovyanaya	5	51	51	0	0
Gladkaya	6	61	60	1	0
Olovyannaya	9	91	80	11	0
Perm	5	46	40	6	5
Tatishchevo	12	121	100-110	21-11	0
<u>2nd Wave</u>					
Kostroma	4	31	0- 10	31- 21	10
Kozelsk	7	60	30	30	11
Svobodnyy	6	61	30- 40	31- 21	0
Yedrovo	5	42	20- 30	22- 12	9
<u>Possible 3rd Wave</u>					
Teykovo	<u>1</u>	<u>8</u>	<u>0</u>	<u>8</u>	<u>3</u>
Totals	60	572	411-451	161-121	38

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Slowdown in Construction Start Rate

The slowdown in the overall rate of Type IIID construction starts that was noted during the first half of 1967 now appears to have held throughout the year. A comparison of identified Type IIID site and group construction starts for the years 1966 and 1967 is shown below. Construction starts of both sites and groups declined at first-wave complexes. At second-wave complexes, the slight increase in group starts, accompanied by a decrease in the number of site starts, almost certainly reflects the incomplete photographic coverage of those complexes.

	1966	1967
1st Wave (began early 1964)		
Drovyanaya, Gladkaya, Olovyanaya, Perm and Tatishchevo Complexes		
Launch Sites	157	27
Launch Groups	13	3
2nd Wave (began late 1965)		
Kostroma, Kozelsk, Svobodnyy and Yedrovo Complexes		
Launch Sites	108	84
Launch Groups	9	11
Possible 3rd Wave (began early 1967)		
Teykovo Complex		
Launch Sites	0	8
Launch Groups	0	1
Total Launch Sites	265	119
Total Launch Groups	22	15

NEW TYPE SILOS AT YOSHKAR-OLA

Photography from [REDACTED]

[REDACTED] Reanalysis of earlier photography indicated that this new construction was not present in [REDACTED] and probably started in [REDACTED]. This complex previously had only SS-7 soft pad launchers.

Construction of 18 silos appears to be underway at the present time. Construction activity noted to date does not resemble that of the Type

IIIC or IIID silo. During a recent study, the working group considered the following possible candidates for deployment at Yoshkar-Ola: a solid-propellant ICBM (KY-6 or variant); a FOBS (SS-S-6 or variant); a follow-on large liquid ICBM; or new site construction techniques for the SS-9 or SS-11. Shorter range missiles of MRBM or IRBM class were considered highly unlikely. On balance, we believe the limited evidence indicates that a solid-propellant ICBM is the most likely associated missile.

Construction of the new sites has not progressed to the point where the final configuration can be ascertained with any certainty. No definite correlation can be made with construction seen at the test rangeheads, but some similarity between these sites, during this early construction stage, with Sites 23 and 24 at Plesetsk has been noted. Each of these sites started with a circular excavation some 55 feet in diameter and they exhibit similar construction techniques. Sites 23 and 24 are in the new eastern area of Plesetsk that is believed to be for solid-propellant missile testing. The only launch site in this area known to have been used by the KY-6, Site 11, was not seen during the construction phase, and its comparison with Yoshkar-Ola or Sites 23 and 24 is unknown.

KY-6 is the designation given to a 3-stage solid-propellant missile that has been flown to 1,050 nautical miles from Kapustin Yar, and to 3,100 and 4,700 nautical miles from Plesetsk. As a point of fact, we are not certain that exactly the same three stages have been used for all ranges. There probably was a reduction in weight between the 1,050 and 3,100 nautical mile missiles, and other changes could have been made before going to 4,700 nautical miles. There is no powered-flight telemetry from the longer range firings to determine the extent of any such changes. Therefore, the maximum range of this missile is not presently known. In any event, a

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4,700 nautical mile range from Yoshkar-Ola provides considerable target coverage of North America.

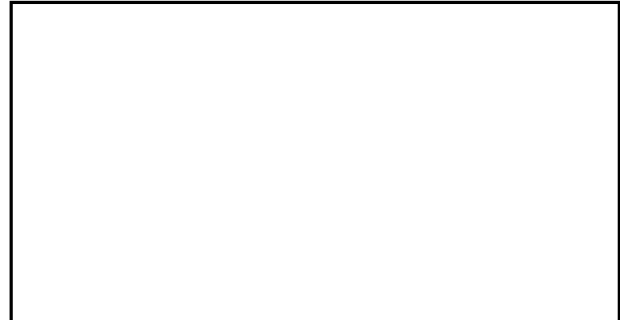
The limited deployment identified to date, however, raises some questions. We would estimate that a solid-propellant deployment program may involve considerable numbers, and would certainly occur at more than one complex. To date, this has not been observed. While this situation may be a result of inadequate photographic coverage of some complexes, we cannot discount the possibility that we are observing a limited program. Indeed, the limited deployment program identified thus far would be more in keeping with the estimated size of an oncoming FOBS program. While we do not think this is the likely explanation for Yoshkar-Ola, these factors prohibit us from commenting with greater certainty on the solid-propellant ICBM deployment at this time. It should be noted that rangehead firings of the SS-X-6 (FOBS) have demonstrated compatibility with Type IIIC silos used for the SS-9. The Yoshkar-Ola sites are definitely not Type IIIC.

Whatever the system involved, the sites at Yoshkar-Ola should be physically complete by mid-1969 and could be operational sometime during the third quarter of that year.

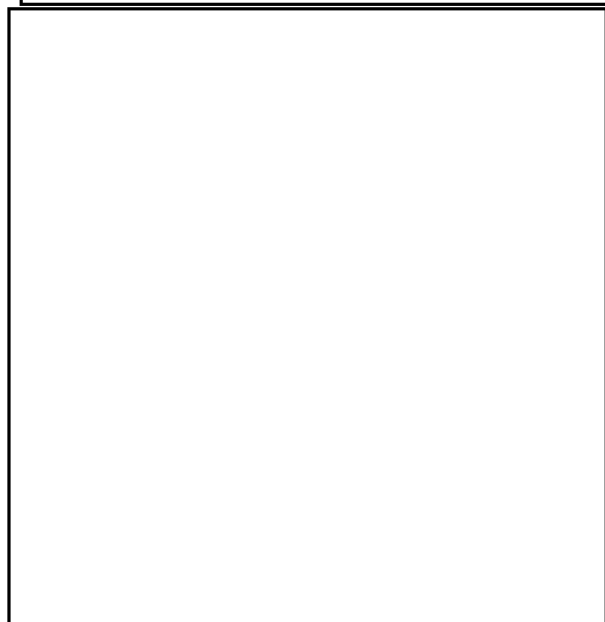
TYURATAM MISSILE TEST CENTER

Since our latest revision several missions have provided good-to-excellent coverage of certain sites at the Tyuratam Missile Test Center (Figure 4). Highlights of these coverages include activity at Site A1; completion of Launch Site G1A; construction progress at Sites I2, I3, and I7; the observance of an erected vehicle on pad J1; a construction halt at Launch Group M; and the probable start of four new single silo launch sites.

The oldest Tyuratam launcher, Pad A1, continues to be active. [REDACTED]



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Rail lines approach the new G1A/G2A pads on an azimuth of about 170 degrees, as compared to the old G1/G2 pad loading orientation of [REDACTED] degrees. The old SS-10 gantry trackage has been removed except for a short section on which the gantries are parked. New trackage has not been laid, indicating the old gantries will not be used. A new fence was installed at Site G2A, which further isolates the gantry from the launch pad and separates this site from G1A.

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Construction continued on the unidentified facility west of Launch Pad G1A. This facility consists of an excavation containing a concrete arch-roofed building and two smaller structures. All are connected by conduit. Since these structures are in an excavation they probably will be

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earth covered when completed. The area is separately fenced and road served.

Other observed activity included extending a new steamline to the general area of the G2 missile-ready building and the construction of a dual-basin sump outside the downrange fence-line. Missile-related equipment/components seen previously near the G1/G2 ready buildings were again observed.

After periods of little or no construction progress, headworks have finally appeared on the silos at Sites I2 and I3. These headworks are circular, with inner and outer diameters of about 30 and [] respectively. Headworks of this size suggest a liquid-propellant system by providing space for exhaust outlets and servicing equipment. No headworks have yet been identified at Site I6. Construction was continuing at the triple-silo Site I7. The liner previously seen near the southernmost silo of this site was gone, indicating that this liner had probably been installed. Liners for the other two silos were still present.

Considerable activity occurred at Complex J. In early [] the J1 service tower had reached a height of about 450 feet and was probably complete, since the crane used to construct it was being dismantled. Two probable lightning diverter towers about 600 feet high were identified near Pad J1. Construction was continuing at Pad J2 and the base of its service tower was nearing completion. All of the buildings between the J pads had been earth mounded and apparently covered with a protective material.

Photography in [] showed a vehicle about 320 feet high erected on Pad J1. This may have been a mockup being used to check out the launcher and associated equipment. We think that several more months of equipment installation and checkout are required and that the Site J1 will

be ready to support firings about mid-1968.

On the roof of the large Complex J assembly building an array of telemetry antennas had been mounted. Outside this building a probable missile transporter was observed. Approximately 200 feet long by 85 feet wide, the transporter appeared to be constructed of heavy steel members with one end elevated. Nearby another transporter was being assembled. Construction was continuing on the Complex J spacecraft facility. The clerestory building in this facility appeared complete externally, and equipping of the building interior was probably underway. The rail line was complete between the spacecraft facility and Complex A. Rail tracks were being installed from the spacecraft facility to the J launch area.

[] no construction progress has been observed at the three single silos of Launch Group M. Whether this represents abandonment or merely a hiatus is unknown. We are uncertain whether there is any relationship between the work stoppage at the M silos and the construction start of new probable single-silo sites in late 1967, designated Launch Group O. All the O sites are in an early stage of construction and are in the western part of the rangehead. Although no silo coring has been identified at one of the sites (O3) all four are considered probable sites because of their appearance, spacing, and identified excavation activity.

Site O1 is about 1.7 nm from Site L8, and consists of a coring in a large excavation whose long axis is oriented []. A road is being constructed to this excavation and a rectangular flat-topped earth mound is close to the excavation. Site O2 is approximately 1.7 nm from L10, and consists of a similar coring and excavation. This excavation is oriented on an azimuth of []. From Site O2 nearly straight ground scars extend toward Sites M2 and O1. Site O4 is on the far west side

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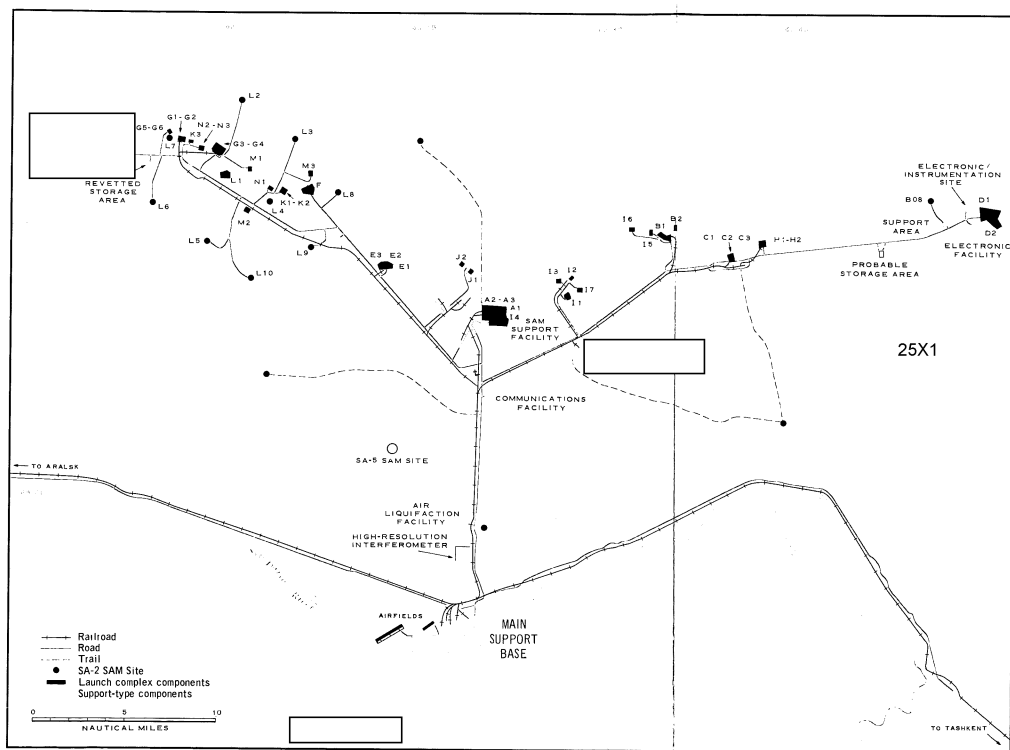


FIGURE 4. TYURATAM MISSILE TEST CENTER.

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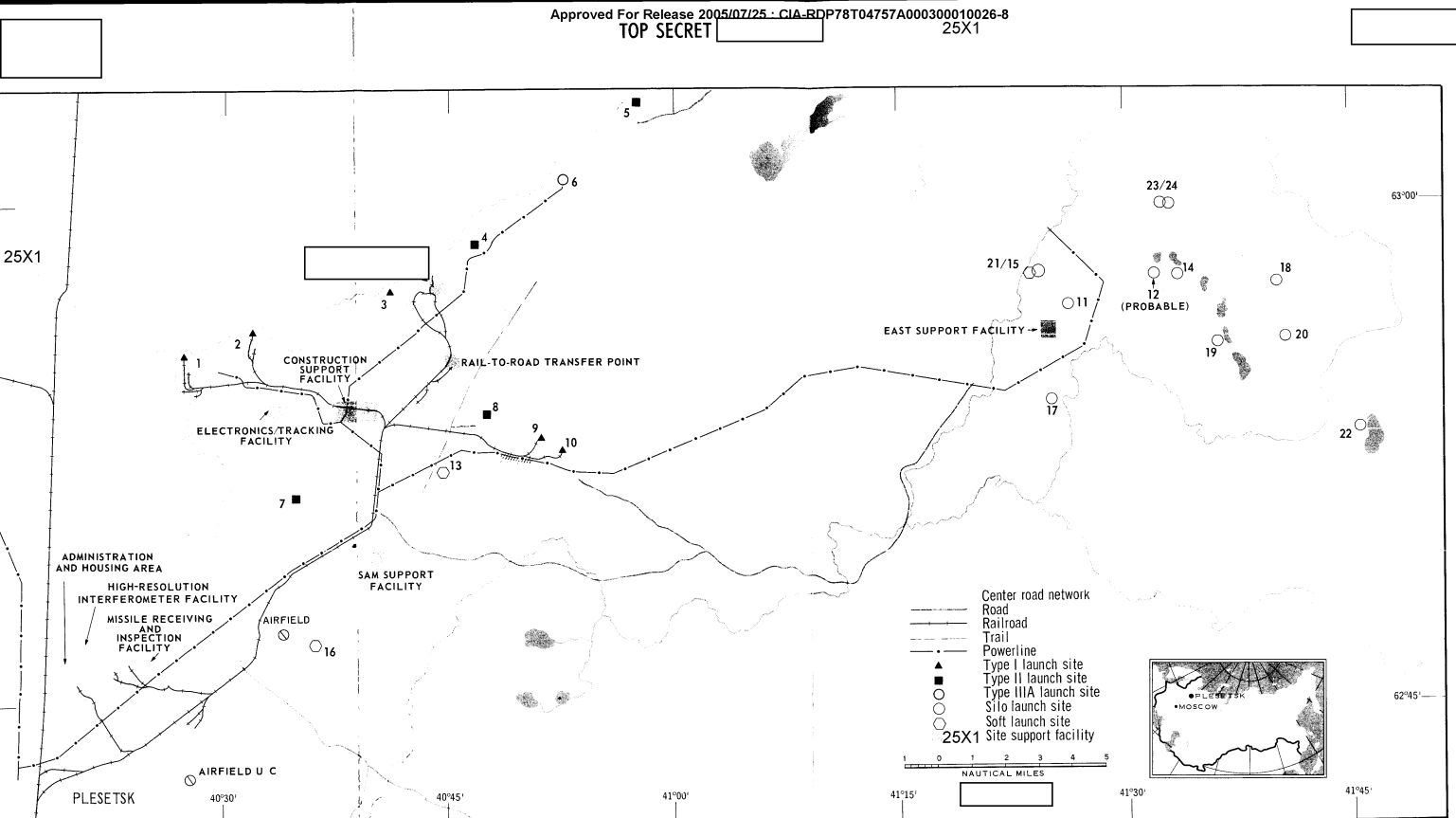


FIGURE 5. PLESETSK MISSILE AND SPACE CENTER.

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of the rangehead, near L10. The orientation of the long axis of the excavation here is very close to that of O2, and it has a mound similar to Site O1. Unlike the other sites of Launch Group O, Site O3 is located very close to another site. The location of O3 almost against the fenceline of the K1/K2 launch site indicates, perhaps, that the positioning of this site was very important. The excavation orientation of O3 is almost the same as that of Site O1, the closest of the new sites. Several buildings under construction are near Site O3.

PLESETSK MISSILE AND SPACE CENTER

Since our 27th Revision only limited portions of the Plesetsk Missile and Space Center (Figure 5) were covered on usable photography, and only limited activity was observed. [REDACTED]

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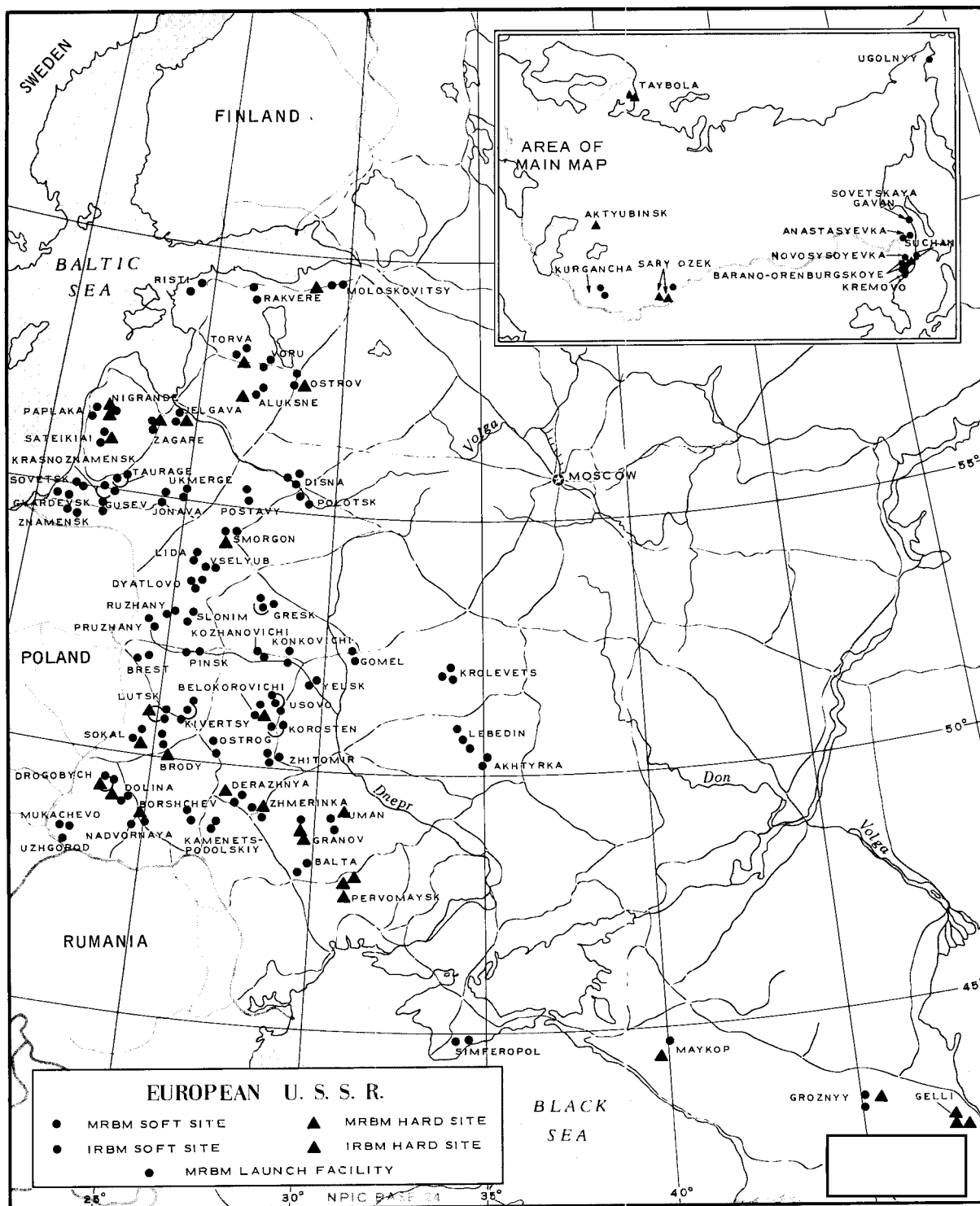


FIGURE 6. DEPLOYMENT OF SOVIET IRBM/MRBM COMPLEXES.

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SOVIET IRBM/MRBM DEPLOYMENT

With the exception of the addition of four launch pads to an existing Type 1 launch site at the Kremovo Complex, no major changes in the IRBM/MRBM force have been observed since the publication of the 27th Revision. The four additional launch pads increase the current total of operational launchers to 713, including 135 in a hard configuration, deployed at 182 launch sites. New pad construction has occurred at the Gvardeysk MRBM Complex, but it is difficult to relate these pads to any strategic systems. In addition, four new sites in the eastern USSR have been identified and associated with a mobile missile system, probably the tactical range SS-12.

No evidence indicating further deployment of the present IRBM/MRBM systems or the deployment of new systems has been detected, although new unique soft-pad construction of an unidentified type has occurred at one MRBM complex. However, present construction and site modification activity at the Kapustin Yar Missile Test Range may indicate new developments in the future. The locations of IRBM/MRBM deployment are shown in Figure 6. Typical configurations of the launch sites and the weapon system associated with each are depicted in Figure 7.

Kremovo MRBM Complex

The addition of four launch pads to an existing launch site has been observed at Kremovo Launch Site 1 (see Figure 8). These pads were constructed sometime after [REDACTED]. The orientation of the new pads is similar to the older pads. An exercise which included an erector, a fuel trailer, and two oxidizer trailers at each launch pad was observed in [REDACTED] at the eight pads of Launch Site 1, as well as on the four pads of Launch Site 2, confirming the status of the new pads. These launch pads were constructed in

less than a year. Until a similar modification occurs at other launch sites, an accurate assessment of the impact on the total Soviet IRBM/MRBM threat cannot be made.

Gvardeysk MRBM Complex

Initial deployment of a new type of missile system may be under way at the Gvardeysk MRBM Complex. Launch pads have been identified at one of the two sites that comprise the complex (see Figure 9). These pads probably were constructed during the first half of 1967. They do not resemble in configuration, size, or arrangement any known MRBM launch site or the testing sites at Kapustin Yar.

The new construction includes six new fan-shaped pads [REDACTED] and a rectangular hardstand within the launch area, as well as three new buildings in the support area. The original site consisted of four elliptical launch pads arranged in an irregular pattern. The new pads appear to be oriented due west, at a 45-degree angle to the launch azimuth of the existing MRBM pads. These pads do not appear large enough to support the normal complement of equipment necessary to erect and launch the SS-4, which has been deployed there since the early 1960s.

A definite function cannot yet be assigned to the additional pads at Gvardeysk. Factors which suggest an MRBM association are their location within a long-established MRBM site, the age and relative obsolescence of the SS-4, and the testing of new missiles (the KY-6 and KY-8) to MRBM/IRBM ranges. On the other hand, the use of soft pads and the absence of test range prototypes are inconsistent with current Soviet offensive missile deployment practices. Additional construction and/or the identification of equipment will be required before any firm assessment of these new pads can be made.

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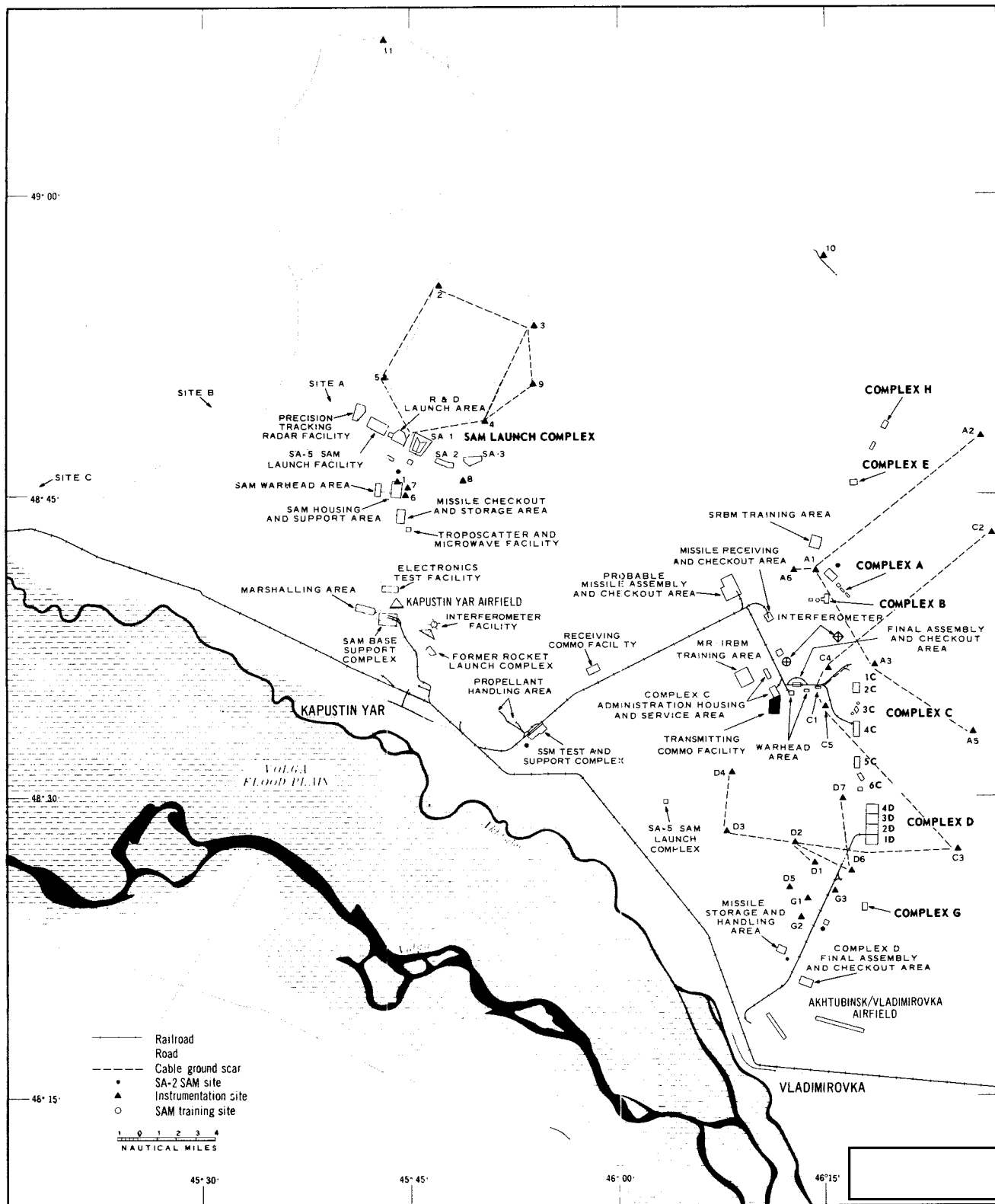


FIGURE 11. KAPUSTIN YAR MISSILE TEST CENTER.

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Other Developments

Four newly identified sites, with nine launch points each, are located within existing IRBM/MRBM complexes and one ICBM complex. One site is located within the Sary Ozek IRBM Complex (Figure 10), two at the Kremovo MRBM Complex, and one at the Drovyanaya ICBM Complex.

Although the weapon system is not believed to be part of the strategic threat of the Soviet Missile Forces, these sites have been associated with the mobile [] missile system, but the capabilities of weapons system for these sites has not been defined.

The missile for the [] system is carried in a closed container or pod aboard a SCUD-type transporter, an eight-wheeled transporter-erector-launcher (TEL). Launch sites for this system appear to contain nine launch pads in a roughly circular arrangement; in addition the sites at the Sary Ozek IRBM Complex and the Drovyanaya ICBM Complex also contain two adjacent vehicle sheds. No prototype site for this system has been identified at any of the Soviet test centers. The use of a fixed field site for this system may indicate a Soviet plan to utilize additional fixed field sites in a similar mode with further new construction at various locations included. No [] site construction has been detected in the western USSR to date.

KAPUSTIN YAR MISSILE TEST CENTER

Significant activity was noted at Complexes B, C, and E at the Kapustin Yar Missile Test Center (Figure 11) during []

At Complex B, possible modification of portions of the launch facility were in progress. Some construction was continuing at Launch Site 4C1. Activity at Launch Site 6C was continuing, with the facility probably in a late stage of construc-

tion. In the same time frame of Launch Site 6C's construction, there was construction noted at soft Launch Site 5C2, which may be associated with 6C. A probable resurfacing operation was in progress at Complex E.

Launch Complex B

[] photography revealed that the inclined launcher of 1B1 and the inclined launcher of 1B2 had been dismantled and removed from the pads. A further development at Complex B has been probable resurfacing of portions of 1B2 and 2B1. Trenching was in evidence from the control bunker between 1B and 2B into the area of 1B, the pad of 1B2, and the area of 2B1.

Launch Site 4C1

During the past four years, the Soviets have been involved in modifications to at least three of the four silos. Modifications began to the northeast (NE) silo prior to [] and to the northwest (NW) silo about []. In each case, the rails for the silo cover were extended to the north, with side rails laid at right angles to the silo cover rails. The rail extensions were in preparation for the addition of a probable refurbishing or servicing tower at each silo. The NE structure was completed by [] and the NW by []. The structures are probably used for repairs to the silos after firing.

Significant modifications have taken place in relation to the southwest (SW) silo. Initially, in [] construction was begun to extend a rail spur into the SW silo and was completed by []. Two construction projects were initiated. The SW silo diameter was reduced from approximately [] to approximately []. A side rail was laid parallel to the existing rail spur with a 25-foot break in it. The eastern point was elevated [] above the western point. As of [] (the probable completion date of the rail), a "rail-through" structure was located at the

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rail-break, perhaps with the capability of moving on wider gauge rails from the western point to the eastern point. A transloading function is indicated, as well as possibly providing for an undetermined missile or missile component servicing operation.

Modification of the southeast (SE) silo was evident in [] To date, it is not apparent whether this activity is similar to the work at the SW silo.

Launch Site 6C

As of [] the southern silo had the headwork forms in place, the center silo had partial forms in place, while no headwork construction had been noted at the northern silo. The control bunkers and conduits were earth covered. In [] back-filling operation was underway at the southern and center silos. Construction on the northern silo has lagged behind the other two. Late-stage construction activities remain to be accomplished such as: final grading and paving, installing silo doors and rails, outfitting the silo, and performing checkout procedures. Launch Site 6C could be operational by the summer of 1968.

Launch Site 5C2

Construction activity was noted in and adjacent to Launch Site 5C2 during the initial period of 6C's construction. Ground scarring noted in [] at the NE perimeter resulted in a circular excavation of approximately [] in diameter. As of [] the foundations of three buildings had been laid -- two within the site and one adjacent to the site. The three buildings were probably complete by [] As the initiation of construction at Launch Site 5C2 closely approximated that of 6C, it seems possible that the two will serve a related function. Launch Site 5C2 may amount to a servicing and/or support area for 6C.

Launch Complex E

[] half of the pad was involved in a possible resurfacing operation. By [] the entire pad was possibly being resurfaced. Ground scarring may indicate that the pad was being extended to the southeast. Some trenching was also present. No missile system has ever been identified with this facility, therefore the current activity cannot be explained.

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TABLE 1. SUMMARY OF ESTIMATED STATUS OF IDENTIFIED ICBM, IRBM, AND MRBM
LAUNCHERS AT DEPLOYED COMPLEXES,

Type	Sites	Launchers	Operational	U/C	Type	Sites	Launchers	Operational	U/C
ICBM					IRBM				
IA	3	4	4	0	III	13	50	50	0
IIA	5	10	10	0	IV	17	51	51	0
IIB	29	58	58	0	TOTALS	30	101	101	0
IIC	7	14	14	0	MRBM				
IID	30	60	60	0					
IIIA	23	69	69	0	I	84	340	340	0
IIIB	3	9	9	0	II	47	188	188	0
IIIC	195	195	120	75	IV	21	84	84	0
IIID	572	572	410-450	162-122	TOTALS	152	612	612	0
U/I	18	18	0	18					
TOTALS	885	1009	754-794	255-215	GRAND				
					TOTALS	182	713	713	0

*Figures include 3 launch silos at Type IIIA and IIIB ICBM and Type IV IRBM sites, and 4 launch silos at Type IV MRBM sites. Type IIIC and IIID ICBM sites contain single silos. Also included are the new, undesignated silos at Yoshkar-Ola.

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